UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/671,729	02/02/2010	Aixing Fan	8374-00-PC	3633

23909 7590 01/25/2017

COLGATE-PALMOLIVE COMPANY
909 RIVER ROAD
PISCATAWAY, NJ 08855

EXAMINER
GHALI, ISIS A D

ART UNIT	PAPER NUMBER
1611	

NOTIFICATION DATE	DELIVERY MODE
01/25/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent_Mail@colpal.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte AIXING FAN, H. STEVEN MISNER,
LA TONYA KILPATRICK-LIVERMAN, ELIZABETH LINN,
DARRICK CARLONE, and JOHN P. HOGAN [1]

Appeal 2015-007765
Application 12/671,729
Technology Center 1600

Before, ERIC B. GRIMES, TIMOTHY G. MAJORS, and
DEVON ZASTROW NEWMAN, *Administrative Patent Judges*.

NEWMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims to an antiperspirant composition. The Examiner entered final rejections for obviousness.

We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

---

[1] Appellants identify the Real Party in Interest as Colgate-Palmolive Company. Br. 2.

STATEMENT OF THE CASE

According to the Specification, "[i]t is known that fatty acids can be selected as a gellant in an antiperspirant/deodorant composition. While fatty acids can be used, they are not used in practice because they result in products that create an undesired level of softness, which results in too much payout of the product. It would be desirable to use fatty acids because of the lower cost, but there needs to be a solution to the softness caused by the fatty acids." Spec. ¶ 1.

Claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26 are on appeal. Claim 1 is illustrative and reads as follows:

> 1. A composition comprising:
> a) an antiperspirant active;
> b) a first gellant comprising a fatty acid in an amount of greater than 7 weight%, wherein the fatty acid is at least one fatty acid chosen from palmitic acid and stearic acid; and
> c) a plant oil in an amount of at least 15 weight%, wherein the plant oil is the oil from the plant and wherein the plant oil is at least one oil chosen from palm kernel oil and coconut oil; and
> wherein the composition is a stick product.

Br. (Claims App'x.) 8.

The following rejections are before us to review:

Claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26 are rejected under 35 U.S.C. § 103(a) as obvious over Cap[2] and either Dayan[3] or Potechin.[4] Ans. 2.

Claims 15–17 are rejected under 35 U.S.C. §103(a) as obvious over the combination of Cap with either Dayan or Potechin as applied to claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26, and Fan.[5] Ans. 10.

Appellants do not separately argue the rejection of claims 15–17 under 35 U.S.C. 103(a) as obvious over Cap with either Dayan or Potechin and Fan, but instead rely on their argument regarding the rejection of claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26 over Cap with either Dayan or Potechin. Accordingly, we address these rejections together and find it necessary to consider only Cap, Dayan, and Potechin.

DISCUSSION

The Examiner finds that Cap discloses a composition comprising an antiperspirant, vegetable oil, partially hydrogenated vegetable oil, and fatty acids. Ans. 3. The Examiner finds that Cap's composition defines "partially hydrogenated vegetable oil" to include "mixtures of partially hydrogenated vegetable oil and vegetable oil which has not been hydrogenated including coconut oil and palm kernel oil." *Id.* The Examiner finds Cap's disclosure of fatty acids includes and a blend of palmitic acid and stearic acid called "palm stearic acid." *Id.* The Examiner finds Cap discloses a deodorant stick

---

[2] US 2005/0281851 A1, published Dec. 22, 2015 ("Cap")
[3] WO 2006/036557 A1, published April 6, 2006 ("Dayan")
[4] US 6,682,749 B1, issued Jan. 27, 2004 ("Potechin")
[5] US 2008/0187504 A1, published Aug. 7, 2008 ("Fan")

containing a deodorant active and a blend of vegetable oils and glycerides comprising 27.2%, "which reads on more than 15% plant oils as claimed by claim 1." *Id.* at 3–4. The Examiner further finds Cap's composition "comprises 20.5% stearic acid, which reads on greater than 7% fatty acid as claimed by claim 1." *Id.* at 4. The Examiner finds Cap "further teaches that [a] blend of vegetable oil moisturizes human skin, provides a protective barrier, acts as [an] emollient, and may promote healing of cracked, dry or damaged skin." *Id.*

The Examiner finds that Dayan teaches a "delivery system … useful for topically applied compounds including antiperspirants" that "comprises [a] composition comprising advantageously 40-80% of oil. The oil comprises coconut oil, soybean oil, palm kernel oil, and mixture[s] thereof." *Id.* at 5.

The Examiner finds "Potechin teaches a composition comprising an antiperspirant and 0.5-50% plant oil, i.e. at least 12 weight%. The composition further comprises a gellant. The gellant may comprise hydrogenated soybean oil and a hydrocarbon or a fatty alcohol and/or a fatty acid, e.g. stearic and/or palmitic acid." *Id.* The Examiner further finds Potechin teaches the "composition has low residue and exhibits reduced or eliminated film formation when applied to the skin and increased availability of the active ingredients." *Id.* at 5–6. The Examiner concludes that it would have been obvious "to provide [a] cosmetic composition comprising antiperspirant and/or deodorant, fatty acid and plant oil as taught by Cap, and use 40-80% oil as taught by Dayan or up to 50% oil as taught by Potechin." *Id.* at 6. Specifically, the Examiner concludes it would have

been "obvious . . . to provide [a] cosmetic composition comprising antiperspirant and/or deodorant, plant oil and fatty acid as taught by Cap combined with Dayan or Potechin, and use [a] combination of palmitic acid and stearic acid, palm kernel oil or coconut oil" in light of the disclosures and advantages of these compounds (e.g., moisturizing, protective, and healing effects) as recited in these references. *Id.* at 7.

We agree with the Examiner that Cap and Dayan or Potechin support a prima facie case of obviousness. Cap discloses a cosmetic composition including a vegetable oil blend comprising a partially hydrogenated vegetable oil and a free fatty acid. Cap ¶ 13. Cap discloses that the blend of oils has moisturizing and protective properties. *Id.* at Abstract. The vegetable oil blend of Cap includes "any plant-based oil which has been partially hydrogenated." *Id.* at ¶ 15. Cap specifies that coconut oil and palm kernel oil are suitable examples. *Id.* Cap teaches that suitable fatty acids include palmitic acid or stearic acid, and combinations thereof. *Id.* at ¶ 16. Cap discloses an example composition having 53.3 wt% plant oils[6] and 20.5 wt% stearic acid. *Id.* at ¶ 35. Cap discloses that the degree of hydrogenation of the oils can be modified to alter the melting temperature of the resultant compound, and provides examples including an antiperspirant stick that also contains an antiperspirant active. *Id.* at ¶¶ 20, 45.

---

[6] Although the Examiner calculates 27.2% plant oils (*see* Ans. 4), wCap ¶ 35 teaches a composition comprising at least 53.5% plant oil, consisting of 1% soybean oil, 41.9% partially hydrogenated soybean oil, and 10.4% hydrogenated soybean oil. In any event, Cap's example composition comprises at least 15 weight% plant oil, as recited in claim 1.

Dayan discloses a delivery system for topically applied compounds, including antiperspirants, that includes a fatty acid, a phospholipid, and an oil. Dayan Abstract, 1:7–9. Dayan discloses the oil can be natural or synthetic, or a blend of both, and comprises about 20–90% by weight. *Id.* at 10:23–27. Dayan discloses that the oil can be coconut oil, palm oil, or palm kernel oil. *Id.* at 11:5–7, 20. Dayan discloses multiple "deodorant or antiperspirant compound[s]." *Id.* at 20:15–26.

Potechin discloses a cosmetic composition made in solid, gel, or liquid form. Potechin at 3:22–24. The composition contains an active, which can be an antiperspirant or deodorant. *Id.* at 3:29–32; 3:56–66. Potechin discloses the composition may contain an emollient to improve aesthetics or performance. *Id.* at 9:63–67. Example emollients provided by Potechin are fats and oils, including coconut and palm oil, and fatty acids, including stearic or palmitic acid. *Id.* at 10:8–30 and 10:61–67. Potechin teaches that "[t]he emollient or emollient mixture or blend thereof incorporated in compositions according to the present invention can, illustratively, be included in amounts of 0.5–50 %." *Id.* at 11:46–48.

We agree with the Examiner that the product of claim 1 would have been obvious based on Cap combined with Dayan or Potechin. Cap suggests a composition suitable as an antiperspirant, which discloses plant oils or fatty acids. Cap discloses palm kernel oil and coconut oil as specific examples of plant oils, and stearic acid and palmitic acid – as well as the blend of palm-stearic acid – as suitable fatty acids. Cap does not expressly disclose the same ranges for these components as recited in claim 1, however Cap discloses examples that fall within the claimed ranges. In

addition, Dayan expressly teaches 20–90% plant oil in its delivery system and Potechin teaches 0.5–50% as a suitable range for its emollients, which substantially overlaps with the claimed ranges. *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (in "cases involving overlapping ranges, we and our predecessor court have consistently held that even a slight overlap in range establishes a prima facie case of obviousness."). Thus, absent persuasive argument or evidence to the contrary, it would have been obvious to make a composition containing an antiperspirant active with either palmitic acid or stearic acid as the fatty acid in an amount greater than 7 wt% and either palm kernel oil or coconut oil as the plant oil in an amount greater than 15 wt%.

Appellants argue "[w]ithout using applicants' application as a guide, there is no direction to one of ordinary skill in the art to make the selections for the claimed materials and the claimed amounts to make an antiperspirant stick . . . None of these references alone or in combination direct the selection of all seven elements from among all of the variables to be put in the claimed combination." Br. 3. Similarly, Appellants argue "[t]here is no disclosure of selecting palm kernel oil or coconut oil from [the list of oils in Cap] and then putting it in combination with an amount of palm kernel oil or coconut oil being greater than 15 weight% in an antiperspirant stick." *Id.* at 5. Similarly, Appellants argue

> there is no direction provided in Dayan '557 to select at least one of palmitic acid and stearic acid as the fatty acid, an amount of fatty acid being at least 7 weight %, at least one of palm kernel oil and coconut oil, an amount of plant oil itself being at least 15%, and an antiperspirant to form a stick product. Too

> much picking and choosing is needed with no direction provided to make the claimed selections.

Id. at 5–6.

Appellants further argue the disclosure of Cap paragraph 22 disclosing "0.01 to 4.5% palm glycerides and 0.01-4.5% hydrogenated palm glycerides … does not direct for the selection of palm kernel oil because the specific type of palm glyceride is not specified." *Id.* Moreover, Appellants argue that even if a skilled artisan took this as a direction to select palm kernel oil, "[t]his would direct the selection of less than 4.5% of the combined amount of these palm glycerides," which Appellants argue is 1.6% palm glycerides in total "because the blend is only added at 51 % in the composition." *Id.* According to Appellants:

> Cap '851 expressly teaches away from making a selection of at least 15% palm kernel oil and/or coconut oil and further putting this in combination with the antiperspirant active, the fatty acid being at least one of stearic acid and palmitic acid, and the amount of fatty acid being at least 7 weight % to form a stick product.

Id.

These arguments are not persuasive as the Examiner's rejection is based on the *combined* teachings of Cap and Dayan or Cap and Potechin. *See* Ans. 2. We agree with the Examiner because nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *In re Merck & Co. Inc.,* 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also In re Keller,* 642 F.2d 413, 426 (CCPA 1981) (finding "one cannot show nonobviousness by

attacking references individually where, as here, the rejections are based on combinations of references" (citations omitted)). Thus, whether any of these references alone fails to expressly teach the claimed combination is not dispositive. As stated by the Examiner, Cap discloses a composition in stick form containing an antiperspirant, a fatty acid, and a plant oil. Cap ¶¶ 13–15, 20, 35, 45. Sample compositions disclosed in Cap comprise a fatty acid or blend in an amount greater than 7 wt%, and a plant-based oil or blend in an amount greater than 15 wt%. *Id.* at ¶ 35. Dayan discloses the use of oils that are not hydrogenated, in an amount between 20–90 wt%. Dayan 1:7–9; 10:23–27. Alternatively, Potechin discloses a composition containing "oils which are the glyceryl esters of fatty acids or triglycerides, normally found in plant and animal issues . . . Specific examples include . . . coconut . . . [and] palm oil." Potechin 10:8–30. Potechin discloses the range for these compounds as 0.5–50%. *Id.* at 11:46–48.

> It is *prima facie* obvious to combine two compositions [or ingredients/components] each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. . . . [T]he idea of combining them flows logically from their having been individually taught in the prior art.

In re Kerkhoven, 626 F.2d 846, 850 (CCPA 1980).

Here, the Examiner has combined the components already used in Cap with the amounts specified by Dayan and Potechin as the skilled artisan would have been motivated to do so based the teachings of the references themselves to show that all of the elements of claim 1 would have been obvious.

With regard to Potechin, Appellants argue that the Declarations of Potechin[7] and Linn,[8] inventors of the cited Potechin reference,[9] respectively, demonstrate

> that the 0.5–50% refers to the total amount of emollient and that there is no direction for the selection of an amount for any one class of emollient listed or the specific species of emollient listed. The 0.5 to 50% is not applied to any particular emollient. This refers to the total of all emollients. There is no disclosure or suggestion for amounts for the specific emollients, and in particular, palm kernel oil, coconut oil, palmitic acid, and stearic acid.

Br. 3–4. Appellants further argue "[t]here is no basis for stating that the ranges claimed for palm kernel oil, coconut oil, palmitic acid, and stearic acid is within the scope of the amounts of materials disclosed in Potechin '749, because, in fact the ranges are not disclosed." *Id.* at 4.

These arguments are not persuasive. "An expert opinion is no better than the soundness of the reasons supporting it." *Perreira v. Secretary of the Dept. of HHS*, 33 F.3d 1375, 1377 (Fed. Cir. 1994). Potechin teaches:

> Emollients are a known class of materials in this art, imparting a soothing effect to the skin. These are ingredients which help to maintain the soft, smooth, and pliable appearance of the skin. Emollients are also known to reduce whitening on the skin and/or improve aesthetics. Examples of chemical classes from which suitable emollients can be found include:

---

[7] Declaration under 37 C.F.R. § 1.132 of Kathy Potechin, signed March 22, 2013, submitted in copending Application No. 12/671,715.
[8] Declaration under 37 C.F.R. § 1.132 of Elizabeth Linn, signed March 22, 2013, submitted in copending Application No. 12/671,715.
[9] Linn is also a co-inventor on the instant application.

> (a) fats and oils which are the glyceryl esters of fatty acids, or triglycerides, normally found in animal and plant tissues,
> . . .
> Specific examples include . . . coconut [oil], palm oil . . .
> . . .
> (d) saturated and unsaturated fatty acids which are the carboxylic acids obtained by hydrolysis of animal or vegetable fats and oils . . . Specific examples include . . . palmitic, stearic . . . acid.
> . . .
> *The emollient or emollient mixture or blend thereof incorporated in compositions according to the present invention can, illustratively, be included in amounts of 0.5–50* %, preferably 1–25 %, more preferably 3–12 %, by weight, of the total weight of the composition.

Potechin 10:1–11:50 (emphasis added). The skilled artisan would read the language above to mean that any one of the listed emollients, or combinations of them, could be used in an amount of 0.5–50 wt%. *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) ("[D]isclos[ing] a multitude of effective combinations does not render any particular formulation less obvious.").

Appellants further argue the prior art as reflected in Walling[10] teaches that "there is an expectation that oils, such as those listed in Potechin '749 at column 10, lines 27 to 31, should not be used in higher amounts because high levels of non-volatile organic fluids inhibit antiperspirant efficacy by impeding release characteristics from the applied product." Br. 4. The relevant language of Walling is:

---

[10] US 7,347,989 B2, issued March 25, 2008 ("Walling")

> It is well known in the art that once applied to the underarm area, an antiperspirant film must have a certain level of adhesion to the skin in order to be effective. It is further known that using non-volatile liquids are one way to promote good adhesive properties in antiperspirant products. See, for example, U.S. Pat. Nos. 4,183,911; 4,174,386; 6,406,684; 6,451,295; 6,352,688; and 6,383,476. It is also known in the art that high levels of non-volatile organic fluids inhibit antiperspirant efficacy by impeding release characteristics from the applied product matrix. See, for example, U.S. Pat. Nos. 6,352,688; 6,383,476. Not wishing to be limited by theory, we believe that the non-volatile liquids promote adhesion by plasticizing the dried film applied to the skin.
>
> Thus, prior art suggests that the higher the level of non-volatile liquids the better adhesion of the antiperspirant film to the skin can be achieved. At the same time, it is known in the art that high levels of non-volatile organic components negatively affect the product efficacy.

Walling 1:36–54.

This argument is not persuasive. "When prior art contains apparently conflicting references, the Board must weigh each reference for its power to suggest solutions to an artisan of ordinary skill." *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991). Appellants would have us believe, first, that the above disclosure of "non-volatile liquids" refers to the plant oils disclosed in the instant application, and, second, that Walling discourages their use in the amounts recited in claim 1. Neither holds true. The cited excerpt of Walling identifies only unspecified "non-volatile organic fluids." No plant-based oil is identified. Second, Walling's statement "high levels of non-volatile organic fluids inhibit antiperspirant efficacy by impeding release characteristics from the applied product matrix" is a general statement with no specific relevance to the instant facts. Walling does not state that more

than 15 wt% is a "high level of non-volatile organic fluid" and we are not convinced that the skilled artisan would so interpret this statement. And, even if Walling was read as extending to plant oils, its suggestion is inconsistent with the amounts of such oils that the other applied references expressly teach may be included in cosmetic, including antiperspirant, compositions as discussed above.

Conclusion of Law

We affirm the rejection of claim 1 as obvious over Cap and Dayan or Potechin.

Appellants' Brief on Appeal purports to also separately argue the patentability of claims 4, 18, and 21. Br. 6. Under the heading for each of the dependent claims, however, Appellants simply restate that "there is no suggestion to select palmitic and stearic acid together with all of the other elements in claim 1." *Id.* We will therefore treat the claims 4, 18, and 21 as being grouped with independent claim 1, from which each depends. Claims 2, 4, 6, 7, 9–12, 15–23, and 26 have not been argued separately and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

As discussed above, Appellants have waived arguments directed to Fan. We therefore also affirm the rejection of claims 15–17 under 35 U.S.C. § 103(a) as unpatentable over Cap, Dayan, and Fan or Cap, Potechin, and Fan. *See Hyatt v. Dudas,* 551 F.3d 1307, 1314 (Fed. Cir. 2008) ("In the event of such a waiver, the PTO may affirm the rejection of the group of claims that the examiner rejected on that ground without considering the merits of those rejections.").

SUMMARY

We affirm the rejection of claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26 under 35 U.S.C. § 103(a) as obvious over Cap and Dayan or Potechin.

We affirm the rejection of claims 15–17 under 35 U.S.C. §103(a) as obvious over the combination of Cap with either Dayan or Potechin as applied to claims 1, 2, 4, 6, 7, 9–12, 15–23, and 26, and Fan.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED